

that the combination of either Hockley or Wolff with one of the secondary references teach each element of the claims.

The present invention is directed toward a method and an instrument for determining periodic motion of structures. The instrument is an imaging interferometer equipped with a pulsed illumination source. The illumination source is pulsed synchronously and with a predetermined relationship to the motion of the structure. Each of the independent claims is amended herein to require a light source that produces a pulsed output.

None of the cited art teaches or suggests an optical measuring device using a pulsed light source. Further, none of the cited art teaches synchronizing the movement of the imaged device with the pulsations of a light source. Neither Hockley, Wolff, or Dickey teach or suggest anything that could be considered a pulsed light source. The rejection asserts Gutierrez teaches synchronizing the detectors with a modulation or pulsation of the source at column 4, lines 24-26. However, this section of Gutierrez states "In addition, synchronous detectors can be used to eliminate much signal noise and to largely eliminate intensity effects." There is nothing in this statement that teaches the use of a pulsating light source, or synchronizing movement of an imaged device with the pulsations.

Further, Gutierrez never teaches or suggests the use of a pulsed light source. Gutierrez only shows a modulator 24 that acts on the light source. As stated in Gutierrez, the laser source is passed through the modulator 24, where it is "amplitude and/or frequency modulated at radio or higher frequencies (generally kilohertz to Gigahertz) by a signal from an oscillator 25." Modulation involves encoding a signal on a carrier. There is no suggestion that a modulator would create a pulsed light signal, as is required by the claims.

In view of the foregoing distinctions, Applicants respectfully submit that independent Claims 1, 3, 6, 15, and 17 are patentably distinguished over the cited art. Applicants respectfully submit that Claims 1, 3, 6, 15, and 17 are in condition for allowance, and Applicants respectfully request allowance of Claims 1, 3, 6, 15, and 17.

Claims 2, 4-5, 7-11, 16, and 18-22 depend either directly or indirectly from one of the independent claims. Each dependent claim further defines the independent claim from which it depends. In view of the foregoing remarks regarding Claims 1, 3, 6, 15, and 17, Applicants respectfully submit that Claims 2, 4-5, 7-11, 16, and 18-22 are likewise in condition for allowance. Applicants respectfully request allowance of dependent Claims 2, 4-5, 7-11, 16, and 18-22.



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Allowable Subject Matter

Claims 12-14 are indicated to contain allowable subject matter if rewritten in independent form. In view of the foregoing remarks regarding the independent claims, Applicants respectfully submit that Claims 12-14 are now in condition for allowance. However, Applicant reserves the right to rewrite Claims 12-14 in independent form.

Summary

In view of the above amendments and remarks, all of the claims should be in condition for allowance. A formal notice to that effect is respectfully solicited.

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Respectfully submitted,



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